

What is claimed is:

1. A computer readable medium comprising:  
a plurality of pieces of video image data to be processed  
5 sequentially; and  
stereoscopic parameters for converting a video image into a  
stereoscopic image, each of which is associated with each of the plurality  
of pieces of video image data.
- 10 2. A computer readable medium comprising:  
a plurality of pieces of video image data to be processed  
sequentially; and  
sub-picture data to be combined with each of the plurality of pieces  
of video image data, wherein the sub-picture data contains stereoscopic  
15 parameters for converting a video image into a stereoscopic image.
3. The computer readable medium according to Claim 1 or 2, further  
comprising a program for causing a computer to execute a stereoscopic  
imaging process effecting the stereoscopic parameters on the video image  
20 data.
4. A stereoscopic parameter embedding apparatus comprising:  
a video image input unit operable to input a plurality of pieces of  
video image data to be processed sequentially;  
25 a parameter input unit operable to input stereoscopic parameters for  
converting a video image into a stereoscopic image, each parameter being  
associated respectively with each of the plurality of pieces of video image  
data;

a converter operable to convert each of the input stereoscopic parameters into binary data; and

an embedding unit operable to embed bar-code image data corresponding to the binary data in each of the plurality of pieces of video image data.

5. A stereoscopic parameter embedding apparatus comprising:

a sub-picture input unit operable to input sub-picture data to be combined with each of a plurality of pieces of video image data to be processed sequentially;

a parameter input unit operable to input stereoscopic parameters for converting a video image into a stereoscopic image, each parameter being associated respectively with each of the plurality of pieces of video image data;

a converter operable to convert each of the input stereoscopic parameters into binary data; and

an embedding unit operable to embed bar-code image data corresponding to the binary data in each of the pieces of sub-picture data.

6. The stereoscopic parameter embedding apparatus according to Claim 5 further comprising:

a video image input unit operable to input a plurality of pieces of video image data to be combined with the sub-picture data; and

a video content data preparing unit operable to prepare video content data of signals, wherein the sub-picture data with the embedded bar-code image data and the video image data input via the video image input unit are multiplexed in accordance with predetermined standards.

7. A stereoscopic image reproducer comprising:

a reader operable to read video image data to be processed sequentially from a computer readable medium, the computer readable medium comprising the video image data and bar-code image data, the bar-code image data being prepared through conversion of stereoscopic  
5 parameters for converting a video image into a stereoscopic image, into binary data;

a bar-code identifying unit operable to identify the bar-code image data embedded in the read video image data;

10 a parameter extracting unit operable to analyze the identified bar-code image data and extract the stereoscopic parameters;

a stereoscopic processor operable to apply a stereoscopic imaging process on the video image data, the stereoscopic imaging process effecting the extracted stereoscopic parameters on the video image data in which the bar-code image data of the stereoscopic parameters is embedded;  
15 and

an output unit operable to output the stereoscopic-process-applied video image data to a display in a predetermined sequence.

8. A stereoscopic image reproducer comprising:

20 a reader operable to read video content data from a computer readable medium, the video content data comprising video image data to be processed sequentially, and sub-picture data to be combined with the video image data and in which bar-code image data is embedded, the bar-code image data being prepared through conversion of stereoscopic  
25 parameters for converting a video image into a stereoscopic image, into binary data;

an extracting unit operable to extract the video image data and the sub-picture data from the read video content data;

a bar-code identifying unit operable to identify the bar-code image data embedded in the extracted sub-picture data;

a parameter extracting unit operable to analyze the identified bar-code image data and extract the stereoscopic parameters;

5 a stereoscopic processor operable to apply a stereoscopic imaging process on the video image data, the stereoscopic imaging process effecting the extracted stereoscopic parameters on the video image data to be combined with the sub-picture data where the bar-code image data of the stereoscopic parameters is embedded;

10 a combiner operable to combine the stereoscopic-process-applied video image data with the sub-picture data; and

an output unit operable to output the video image data with the combined sub-picture data to a display in a predetermined sequence.

15 9. The stereoscopic image reproducer according to Claim 8, further comprising a bar-code eraser operable to alter the sub-picture data to erase the bar-code image data after the bar-code data is analyzed and the stereoscopic parameters are extracted from the bar-code image data, wherein the combiner combines the video image data with the altered sub-  
20 picture data.

10. The stereoscopic image reproducer according to Claim 8 or 9, further comprising a reproduction system switcher operable to switch between reproduction of video image data for stereoscopic viewing and  
25 reproduction of video image data not for stereoscopic viewing, wherein the combiner, if reproduction of video image data for stereoscopic viewing is selected by the reproduction system switcher, combines the stereoscopic-process-applied video image data with the sub-picture data, and if reproduction of video image data not for stereoscopic viewing is selected

by the reproduction system switcher, combines the pre-stereoscopic-process video image data with the sub-picture data.

11. A program for causing a computer to execute a process, the  
5 computer comprising:  
a video image input unit operable to input a plurality of pieces of  
video image data to be processed sequentially; and  
a parameter input unit operable to input stereoscopic parameters for  
converting a video image into a stereoscopic image, each of which is  
10 associated with each of the plurality of pieces of video image data, the  
process comprising:  
converting each of stereoscopic parameters input via the parameter  
input unit into binary data; and  
embedding bar-code image data corresponding to the binary data in  
15 video image data input via the video image input unit.

12. A program for causing a computer to execute a process, the  
computer comprising:  
a sub-picture input unit operable to input sub-picture data to be  
20 combined with each of a plurality of pieces of video image data to be  
processed sequentially; and  
a parameter input unit operable to input stereoscopic parameters for  
a video image into a stereoscopic image, each parameter being associated  
with each of the plurality of pieces of video image data, the process  
25 comprising:  
converting each of stereoscopic parameters input via the parameter  
input unit into binary data; and  
embedding bar-code image data corresponding to the binary data in  
sub-picture data input via the sub-picture input unit.

13. A program for causing a computer to execute a process, the computer comprising:

- 5 a reader operable to read video image data to be processed sequentially from a computer readable medium, the computer readable medium comprising the video image data and bar-code image data, the bar-code image data being prepared through conversion of stereoscopic parameters for converting a video image into a stereoscopic image, into binary data; and
- 10 a display operable to display a video image, the process comprising:
  - identifying the bar-code image data embedded in video image data read by the reader;
  - analyzing the identified bar-code image data to extract stereoscopic parameters;
  - 15 applying a stereoscopic imaging process to the video image data, the stereoscopic imaging process effecting the extracted stereoscopic parameters on the video image data in which the bar-code image data of the stereoscopic parameters is embedded; and
  - outputting the stereoscopic-process-applied video image data to the
  - 20 display in a predetermined sequence.

14. A program for causing a computer to execute a process, the computer comprising:

- 25 a reader operable to read video content data from a computer readable medium, the video content data comprising video image data to be processed sequentially, and sub-picture data to be combined with the video image data and in which bar-code image data is embedded, the bar-code image data being prepared through conversion of stereoscopic

parameters for converting a video image into a stereoscopic image, into binary data; and

- a display operable to display a video image; the process comprising:
  - extracting the video image data and the sub-picture data from the
  - 5 video content data read via the reader;
  - identifying bar-code image data embedded in the extracted sub-picture data;
  - analyzing the identified bar-code image data to extract stereoscopic parameters;
  - 10 applying a stereoscopic imaging process on the video image data, the stereoscopic imaging process effecting the extracted stereoscopic parameters on the video image data to be combined with the sub-picture data in which the bar-code image data of the stereoscopic parameters is embedded;
  - 15 combining the stereoscopic-process-applied video image data with the sub-picture data;
  - outputting the video image data with the combined sub-picture data to the display in a predetermined sequence.

20 15. A method of distributing video content data, comprising:

generating video content data representing signals by a first computer comprising:

- a video image input unit operable to input a plurality of pieces of video image data to be processed sequentially;
- 25 a sub-picture input unit operable to input sub-picture data to be combined with each of the plurality of pieces of video image data; and
- a parameter input unit operable to input stereoscopic parameters for converting a video image into a stereoscopic

image, each of which is associated with each of the pieces of plurality of video image data, the step of generating video content data comprising:

5                   converting stereoscopic parameters input from the sub-picture input unit into binary data;

                  embedding bar-code image data corresponding to the binary data in sub-picture data input from the sub-picture input unit; and

10                   multiplexing the sub-picture data in which the bar-code image data is embedded and video image data input from the video image input unit in conformity with predetermined standards to generate the signals,

                  storing the video content data in a computer readable medium and shipping it;

15                   causing the video content data stored in the computer readable medium to be processed by a second computer capable of reproducing the video content data; and

                  displaying a stereoscopic image of a video image by the second computer, comprising:

20                   extracting the video image data and the sub-picture data from the video content data read from the computer readable medium;

                  identifying the bar-code image data embedded in the extracted sub-picture data;

25                   analyzing the identified bar-code image data and extracting the stereoscopic parameters;

                  applying a stereoscopic imaging process to the video image data, the stereoscopic imaging process effecting the extracted stereoscopic parameters on the video image data



to be combined with the sub-picture data in which the bar-code image data of the stereoscopic parameters is embedded;

- 5 combining the stereoscopic-imaging-process-applied video image data with the sub-picture data; and  
outputting the video image data with the combined sub-picture data to a display in a predetermined sequence.

16. A computer readable medium comprising:  
10 two-dimensional image data; and  
stereoscopic parameters for converting a two-dimensional image into a stereoscopic image, the stereoscopic parameters being associated with the two-dimensional image.
- 15 17. A stereoscopic parameter embedding apparatus comprising:  
an image input unit operable to input two-dimensional image data;  
a parameter input unit operable to input stereoscopic parameters for converting a two-dimensional image into a stereoscopic image;  
a converter operable to convert each of the input stereoscopic  
20 parameters into binary data; and  
an embedding unit operable to embed bar-code image data corresponding to the binary data in the input two-dimensional image data.
18. A stereoscopic image reproducer comprising:  
25 a reader operable to read two-dimensional image data from a computer readable medium, the computer readable medium comprising video image data in which bar-code image data is embedded, the bar-code image data being prepared through conversion of stereoscopic parameters

for converting a two-dimensional image into a stereoscopic image, into binary data;

a bar-code identifying unit operable to identify the bar-code image data embedded in the read two-dimensional image data;

5 a parameter extracting unit operable to analyze the identified bar-code image data and extract the stereoscopic parameters;

a stereoscopic processor operable to apply a stereoscopic imaging process to the two-dimensional image data, the stereoscopic imaging process effecting the extracted stereoscopic parameters on the two-  
10 dimensional image data in which the bar-code image data of the stereoscopic parameters is embedded;

an output unit operable to output the stereoscopic-process-applied video image data to a display in a predetermined sequence.

15 19. A program for causing a computer to execute a process, the computer comprising:

an image input unit operable to input two-dimensional image data;  
and

a parameter input unit operable to input stereoscopic parameters for  
20 converting a two-dimensional image into a stereoscopic image; the process comprising:

converting each of the stereoscopic parameters input via the parameter input unit into binary data; and

embedding bar-code image data corresponding to the binary data in  
25 two-dimensional image data input via the video image input unit.

20. A program for causing a computer to execute a process, the computer comprising:

a reader operable to read two-dimensional image data from a computer readable medium, the computer readable medium comprising the two-dimensional image data in which bar-code image data is embedded, the bar-code image data being prepared through conversion of stereoscopic parameters for converting a two-dimensional image into a stereoscopic image, into binary data; and

5 a display operable to display an image, the process comprising:  
identifying the bar-code image data embedded in the two-dimensional image data read by the reader;

10 analyzing the identified bar-code image data to extract stereoscopic parameters;

applying a stereoscopic imaging process on the two-dimensional image data, the stereoscopic imaging process effecting the extracted stereoscopic parameters on the two-dimensional image data in which the bar-code image data of the stereoscopic parameters is embedded; and

15 outputting stereoscopic image data generated through the stereoscopic process to the display.